



CERTIFICATE OF ACCREDITATION



TCE Services, Inc.

in


Atlanta, Georgia, USA

has demonstrated proficiency for the testing of construction materials and has conformed to the requirements established in AASHTO R 18 and the AASHTO Accreditation policies established by the AASHTO Committee on Materials and Pavements.

The scope of accreditation can be viewed on the Directory of AASHTO Accredited Laboratories (aashtoresource.org).



Jim Tymon,
AASHTO Executive Director



Moe Jamshidi,
AASHTO COMP Chair

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SCOPE OF AASHTO ACCREDITATION FOR:

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Quality Management System

Standard:

Accredited Since:

R18	Establishing and Implementing a Quality System for Construction Materials Testing Laboratories	12/15/2004
ISO/IEC 17025	General Requirements for the Competence of Testing and Calibration Laboratories	06/01/2010
C1077 (Aggregate)	Laboratories Testing Concrete and Concrete Aggregates	01/10/2011
C1077 (Concrete)	Laboratories Testing Concrete and Concrete Aggregates	01/10/2011
C1093 (Masonry)	Accreditation of Testing Agencies for Unit Masonry	01/10/2011
C1222 (Cement)	Evaluation of Laboratories Testing Hydraulic Cement	01/10/2011
E329 (Aggregate)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	08/12/2014
E329 (Concrete)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	08/12/2014
E329 (Masonry)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	07/09/2019



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Dimension Stone

Standard:

Accredited Since:

C97	Absorption and Bulk Specific Gravity of Dimension Stone	02/09/2017
C99	Modulus of Rupture of Dimension Stone	02/09/2017
C170	Compressive Strength of Dimension Stone	02/09/2017
C241	Abrasion Resistance of Stone Subjected to Foot Traffic	02/09/2017
C880	Flexural Strength of Dimension Stone	02/09/2017
C1353	Abrasion Resistance of Dimension Stone Subjected to Foot Traffic Using a Rotary Platform Abraser	02/09/2017



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Soil

Standard:

Accredited Since:

D421 Dry Preparation of Disturbed Soil and Soil Aggregate Samples for Test	05/30/2019
D422 Particle Size Analysis of Soils by Hydrometer	05/30/2019
D698 The Moisture-Density Relations of Soils Using a 5.5 lb [2.5 kg] Rammer and a 12 in. [305 mm] Drop	05/30/2019
D1557 Moisture-Density Relations of Soils Using a 10 lb [4.54 kg] Rammer and an 18 in. [457 mm] Drop	05/30/2019
D2216 Laboratory Determination of Moisture Content of Soils	05/30/2019
D4318 Determining the Liquid Limit of Soils (Atterberg Limits)	05/30/2019
D4318 Plastic Limit of Soils (Atterberg Limits)	05/30/2019



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Rock

Standard:

Accredited Since:

D5240 Evaluation of Durability of Rock for Erosion Control Using Sodium Sulfate or Magnesium Sulfate	05/31/2017
D5312 Evaluation of Durability of Rock for Erosion Control Under Freezing and Thawing Conditions	05/31/2017
D5313 Durability of Rock for Erosion Control Under Wetting and Drying Conditions	05/31/2017



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Aggregate

Standard:	Accredited Since:
C29 Bulk Density ("Unit Weight") and Voids in Aggregate	12/15/2004
C40 Organic Impurities in Fine Aggregates for Concrete	12/15/2004
C87 Effect of Organic Impurities in Fine Aggregate on Strength of Mortar	12/15/2004
C88 Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate	01/01/2011
C117 Materials Finer Than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing	12/15/2004
C123 Lightweight Pieces in Aggregate	08/12/2014
C127 Specific Gravity and Absorption of Coarse Aggregate	12/15/2004
C128 Specific Gravity (Relative Density) and Absorption of Fine Aggregate	12/15/2004
C131 Resistance to Abrasion of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	12/15/2004
C136 Sieve Analysis of Fine and Coarse Aggregates	06/02/2011
C142 Clay Lumps and Friable Particles in Aggregate	12/15/2004
C227 Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar Method)	12/15/2004
C295 Petrographic Examination of Aggregates for Concrete	02/07/2017
C441 Effectiveness of Pozzolans or Ground Blast-Furnace Slag in Preventing Excessive Expansion of Concrete Due to the Alkali-Silica Reaction	02/07/2017
C535 Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	12/15/2004
C566 Total Moisture Content of Aggregate by Drying	12/15/2004
C586 Potential Alkali Reactivity of Carbonate Rocks for Concrete Aggregates (Rock Cylinder Method)	07/09/2019
C641 Iron Staining Materials in Lightweight Concrete Aggregates	08/12/2014
C702 Reducing Samples of Aggregate to Testing Size	12/15/2004
C1252 Uncompacted Void Content of Fine Aggregate (Influenced by Shape, Texture, and Grading)	08/12/2014
C1260 Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)	12/15/2004
C1567 Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)	12/15/2004
D75 Sampling Aggregate	08/12/2014



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Aggregate (Continued)

Standard:

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D2419	Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test	07/09/2019
D4791	Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate	08/12/2014
D5821	Determining the Percentage of Fractured Particles in Coarse Aggregate	02/07/2017
CRD-C130	Estimating Scratch Test Hardness of Coarse Aggregate Particles	07/09/2019



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Iron and Steel

Standard:

Accredited Since:

A615-A370 Carbon-Steel Bars, Deformed and Plain: Tension (Elongation)	02/07/2017
A615-A370 Carbon-Steel Bars, Deformed and Plain: Tension (Ultimate Tensile Strength)	02/07/2017
A615-A370 Carbon-Steel Bars, Deformed and Plain: Tension (Yield Strength)	02/07/2017
A615-E290 Carbon-Steel Bars, Deformed and Plain: Bend Test	07/09/2019
A706-A370 Low Alloy Steel Bars, Deformed and Plain: Tension (Elongation)	02/07/2017
A706-A370 Low Alloy Steel Bars, Deformed and Plain: Tension (Ultimate Tensile Strength)	02/07/2017
A706-A370 Low Alloy Steel Bars, Deformed and Plain: Tension (Yield Strength)	02/07/2017
A706-E290 Low Alloy Steel Bars, Deformed and Plain: Bend Test	07/09/2019



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Concrete

Standard:		Accredited Since:
T336	Coefficient of Thermal Expansion of Hydraulic Cement Concrete	02/09/2017
C31	Making and Curing Concrete Test Specimens in the Field	12/15/2004
C39	Compressive Strength of Cylindrical Concrete Specimens	12/15/2004
C42	Obtaining and Testing Drilled Cores and Sawed Beams of Concrete	12/15/2004
C78	Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	12/15/2004
C138	Density (Unit Weight), Yield, and Air Content of Concrete	12/15/2004
C143	Slump of Hydraulic Cement Concrete	12/15/2004
C157	Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete	12/15/2004
C172	Sampling Freshly Mixed Concrete	12/15/2004
C173	Air Content of Freshly Mixed Concrete by the Volumetric Method	12/15/2004
C192	Making and Curing Concrete Test Specimens in the Laboratory	12/15/2004
C215	Fundamental Transverse, Longitudinal and Torsional Frequencies of Concrete Specimens	12/15/2004
C231	Air Content of Freshly Mixed Concrete by the Pressure Method	12/15/2004
C232	Bleeding of Concrete	12/15/2004
C293	Flexural Strength of Concrete (Using Simple Beam With Center-Point Loading)	08/12/2014
C403	Time of Setting of Concrete Mixtures by Penetration Resistance	12/15/2004
C418	Abrasion Resistance of Concrete by Sandblasting	08/12/2014
C457	Microscopical Determination of Parameters of the Air-Void System in Hardened Concrete	12/15/2004
C469	Static Modulus of Elasticity and Poisson's Ratio of Concrete in Compression	12/15/2004
C496	Splitting Tensile Strength of Cylindrical Concrete Specimens	12/15/2004
C511	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	02/28/2013
C512	Creep of Concrete in Compression	02/28/2013
C531	Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes	12/15/2004



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Concrete (Continued)

Standard:		Accredited Since:
C567	Determining Density of Structural Lightweight Concrete	12/15/2004
C597	Pulse Velocity Through Concrete	07/09/2019
C617 (6000 psi and below)	Capping Cylindrical Concrete Specimens	07/09/2019
C642	Density, Absorption, and Voids in Hardened Concrete	12/15/2004
C666	Resistance of Concrete to Rapid Freezing and Thawing	12/15/2004
C672	Scaling Resistance of Concrete Surfaces Exposed to De-icing Chemicals	12/15/2004
C684	Making, Accelerated Curing, and Testing Concrete Compression Test Specimens	12/15/2004
C805	Rebound Number of Hardened Concrete	08/12/2014
C827	Change in Height at Early Ages of Cylindrical Specimens of Cementitious Mixtures	12/15/2004
C878	Restrained Expansion of Shrinkage-Compensating Concrete	08/12/2014
C882	Bond Strength of Epoxy-Resin Systems Used With Concrete By Slant Shear	12/15/2004
C884	Thermal Compatibility Between Concrete and an Epoxy-Resin Overlay	07/09/2019
C939 (Pre-Mixed)	Flow of Grout for Preplaced-Aggregate Concrete (Flow Cone Method - Pre-Mixed Grout)	01/01/2011
C942 (Pre-Mixed)	Compressive Strength of Grouts for Preplaced-Aggregate Concrete in the Laboratory (Pre-Mixed Grout)	08/12/2014
C944	Abrasion Resistance of Concrete or Mortar Surfaces by the Rotating-Cutter Method	12/15/2004
C1064	Temperature of Freshly Mixed Portland Cement Concrete	12/15/2004
C1074	Estimating Concrete Strength by the Maturity Method	08/12/2014
C1090	Measuring Changes in Height of Cylindrical Specimens of Hydraulic-Cement Grout	04/02/2009
C1105	Length Change of Concrete Due to Alkali-Carbonate Rock Reaction	08/12/2014
C1138	Abrasion Resistance of Concrete (Underwater Method)	02/07/2017
C1140	Preparing and Testing Specimens from Shotcrete Test Panels	02/07/2017
C1152	Acid-Soluble Chloride in Mortar and Concrete	02/09/2017
C1202	Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration	12/15/2004



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Concrete (Continued)

Standard:	Accredited Since:	
C1218	Water-Soluble Chloride in Mortar and Concrete	02/09/2017
C1231 (7000 psi and below)	Use of Unbonded Caps in Determination of Compressive Strength of Hardened Concrete Cylinders	02/28/2013
C1260	Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)	12/15/2004
C1293	Determination of Length Change of Concrete Due to Alkali-Silica Reaction	08/12/2014
C1383	Measuring the P-Wave Speed and the Thickness of Concrete Plates Using the Impact-Echo Method	12/15/2004
C1399	Obtaining Average Residual-Strength of Fiber-Reinforced Concrete	12/15/2004
C1542	Measuring Length of Concrete Cores	08/12/2014
C1550	Flexural Toughness of Fiber Reinforced Concrete (Using Centrally Loaded Round Panel)	02/07/2017
C1567	Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)	12/15/2004
C1579	Evaluating Plastic Shrinkage Cracking of Restrained Fiber Reinforced Concrete (Using a Steel Form Insert)	02/09/2017
C1581	Determining Age at Cracking and Induced Tensile Stress	02/28/2013
C1583	Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension (Pull-off Method)	12/15/2004
C1609	Flexural Performance of Fiber-Reinforced Concrete (Using Beam With Third-Point Loading)	12/15/2004
C1610	Static Segregation of Self-Consolidating Concrete Using Column Technique	08/12/2014
C1611	Slump Flow of Self-Consolidating Concrete	08/12/2014
C1621	Passing Ability of Self-Consolidating Concrete by J-Ring	08/12/2014
C1712	Rapid Assessment of Static Segregation Resistance of Self-Consolidating Concrete Using Penetration Test	08/12/2014
C1741	Bleed Stability of Cementitious Post-Tensioning Tendon Grout	08/12/2014
E488	Strength of Anchors in Concrete Elements	07/09/2019
G109	Determining Effects of Chemical Admixtures on Corrosion of Embedded Steel Reinforcement in Concrete Exposed to Chloride Environments	07/09/2019
CRD-C61	Determining the Resistance of Freshly Mixed Concrete to Washing Out in Water	07/09/2019



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Cement - Physical Tests

Standard:		Accredited Since:
C109	Compressive Strength of Hydraulic Cement Mortars (Using 2-in. Cube Specimens)	12/15/2004
C114 (Loss on Ignition)	Loss on Ignition – Reference	07/09/2019
C151	Autoclave Expansion of Portland Cement	12/15/2004
C183	Sampling and the Amount of Testing of Hydraulic Cement	12/15/2004
C185	Air Content of Hydraulic Cement Mortar	12/15/2004
C187	Normal Consistency of Hydraulic Cement	12/15/2004
C188	Density of Hydraulic Cement	07/09/2019
C191	Time of Setting of Hydraulic Cement by Vicat Needle	12/15/2004
C204	Fineness of Hydraulic Cement by Air Permeability Apparatus	12/15/2004
C266	Time of Setting of Hydraulic-Cement Paste by Gillmore Needles	02/07/2017
C305	Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency	12/15/2004
C348	Flexural Strength of Hydraulic-Cement Mortars	08/12/2014
C430	Fineness of Hydraulic Cement by the 45- μ m (No. 325) Sieve	12/15/2004
C451	Early Stiffening of Hydraulic Cement (Paste Method)	12/15/2004
C452	Potential Expansion of Portland-Cement Mortars Exposed to Portland Cement	02/07/2017
C511	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	02/28/2013
C596	Drying Shrinkage of Mortar Containing Hydraulic Cement	08/12/2014
C1012	Length Change of Hydraulic-Cement Mortars Exposed to a Sulfate Solution	12/15/2004
C1038	Expansion of Hydraulic Cement Mortar Bars Stored in Water	08/12/2014
C1437	Flow of Hydraulic Cement Mortar	12/15/2004
C1506	Water Retention of Hydraulic Cement-Based Mortars and Plasters	12/15/2004
C1698	Autogenous Strain of Cement Paste and Mortar	07/09/2019



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Masonry

Standard:

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C109	Compressive Strength of Hydraulic Cement Mortars (Using 2-in. Cube Specimens)	04/02/2009
C185	Air Content of Hydraulic Cement Mortar	04/02/2009
C305	Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency	04/02/2009
C307	Tensile Strength of Chemical-Resistant Mortar, Grouts, and Monolithic Surfacing	07/09/2019
C511	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	02/28/2013
C579	Compressive Strength of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes	07/09/2019
C580	Flexural Strength and Modulus of Elasticity of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes	07/09/2019
C1019	Sampling and Testing Grout	04/02/2009
C1403	Rate of Water Absorption of Masonry Mortars	02/09/2017
C1437	Flow of Hydraulic Cement Mortar	04/02/2009
C1506	Water Retention of Hydraulic Cement-Based Mortars and Plasters	04/02/2009



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Cementitious Material - Chemical Tests

Standard:

Accredited Since:

C114 Aluminum Oxide – X-Ray Fluorescence	02/07/2017
C114 Calcium Oxide – X-Ray Fluorescence	02/07/2017
C114 Ferric Oxide – X-Ray Fluorescence	02/07/2017
C114 Insoluble Residue – Reference	02/07/2017
C114 Loss on Ignition – Reference	02/07/2017
C114 Magnesium Oxide – X-Ray Fluorescence	02/07/2017
C114 Manganic Oxide – X-Ray Fluorescence	02/07/2017
C114 Phosphorus Pentoxide – X-Ray Fluorescence	02/07/2017
C114 Potassium Oxide – X-Ray Fluorescence	02/07/2017
C114 Silicon Dioxide – X-Ray Fluorescence	02/07/2017
C114 Sodium Oxide – X-Ray Fluorescence	02/07/2017
C114 Sulfur Trioxide – X-Ray Fluorescence	02/07/2017
C114 Titanium Dioxide – X-Ray Fluorescence	02/07/2017
C114 Zinc Oxide – X-Ray Fluorescence	02/07/2017



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Pozzolan

Standard:

Accredited Since:

C109	Compressive Strength of Hydraulic Cement Mortars (Using 2-in. Cube Specimens)	08/12/2014
C151	Autoclave Expansion of Portland Cement	08/12/2014
C157	Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete	08/12/2014
C185	Air Content of Hydraulic Cement Mortar	02/07/2017
C187	Normal Consistency of Hydraulic Cement	08/12/2014
C188	Density of Hydraulic Cement	08/12/2014
C305	Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency	08/12/2014
C430	Fineness of Hydraulic Cement by the 45- μ m (No. 325) Sieve	08/12/2014
C441	Effectiveness of Pozzolans or Ground Blast-Furnace Slag in Preventing Excessive Expansion of Concrete Due to the Alkali-Silica Reaction	08/12/2014
C511	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	08/12/2014
C1012	Length Change of Hydraulic-Cement Mortars Exposed to a Sulfate Solution	08/12/2014
C1437	Flow of Hydraulic Cement Mortar	08/12/2014



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Slag Cement

Standard:

Accredited Since:

C109	Compressive Strength of Hydraulic Cement Mortars (Using 2-in. Cube Specimens)	08/12/2014
C185	Air Content of Hydraulic Cement Mortar	08/12/2014
C188	Density of Hydraulic Cement	08/12/2014
C204	Fineness of Hydraulic Cement by Air Permeability Apparatus	08/12/2014
C305	Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency	08/12/2014
C430	Fineness of Hydraulic Cement by the 45- μ m (No. 325) Sieve	08/12/2014
C511	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	08/12/2014
C1038	Expansion of Hydraulic Cement Mortar Bars Stored in Water	07/09/2019
C1437	Flow of Hydraulic Cement Mortar	08/12/2014